

### REMARKS

Claims 1-21 are pending in the application. Claims 1-17 stand rejected. Claims 14 and 18-21 have been canceled without prejudice. Claims 1 and 15 have been amended. The Examiner's reconsideration of the rejection in view of the following remarks and amendments is respectfully requested.

#### Allowable Subject Matter:

Applicants gratefully acknowledge the Examiner's indication that claims 8 and 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### Claim Rejections- 35 U.S.C. § 103(a):

Claims 1-7, 9-13, and 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicants admitted prior art in the instant application in view of Schnur et al. (U.S. 5,079,600).

With respect to claim 1, amended claim 1 recites, *inter alia*, a method for forming an electrically conductive layer having patterns for semiconductor devices, comprising the steps of forming a non-functional insulation layer on the substrate...forming a functional insulation layer on the non-functional insulation layer, the insulation layer having predetermined functional groups.

Although Applicants respectfully disagree with the claim rejection, claim 1 has been amended to include the allowable subject matter of canceled claim 14 to place the application in condition for allowance.


As such, claim 1, and claims 2-7 and 9-13 depending therefrom, are believed to be in condition for allowance.

Claim 8 has been amended to include the elements of independent Claim 1 as suggested by the Examiner to place Claim 8 in allowable condition.

Claim 15 has been amended to include the allowable subject matter of canceled claim 14. Claims 16-17 depend from claim 15. As such, these claims are believed to be patentable. Claim 22 has been added. Claim 22 is essentially Claim 15 rewritten with the additional allowable subject matter of Claim 8.

In view of the foregoing remarks and amendments, it is respectfully submitted that all the claims now pending claims 1-13, 15-17 and 22 in the application, are in condition for allowance. Early and favorable consideration of the case respectfully requested.

Respectfully Submitted

By:   
\_\_\_\_\_  
Frank Chau  
Reg. No. 34,136  
Attorney for Applicants ✓

F.CHAU & ASSOCIATES, LLP  
1900 Hempstead Turnpike, Suite 501  
East Meadow, New York 11554  
Telephone: (516) 357-0091  
Facsimile: (516) 357-0092

**In the Claims (Marked-up Version):**

Claims 14 and 18-21 have been canceled without prejudice.

**Please amend the claims as follows:**

1. (Amended) A method for forming an electrically conductive layer having patterns for semiconductor devices, comprising the steps of:

providing a substrate;

forming a non-functional insulation layer on the substrate;

forming [an] a functional insulation layer on the [substrate] non-functional insulation layer, the insulation layer having predetermined functional groups;

forming a patterned polymer layer having the patterns on the functional insulation layer;

etching the functional insulation layer in accordance with the patterns of the patterned polymer layer to create a patterned insulation layer;

stripping the patterned polymer layer to expose the patterned insulation layer;

treating the patterned insulation layer with a coupling agent reacting with the predetermined functional groups;

treating the patterned insulation layer with a catalyst-containing solution; and

depositing electrically conductive material on the patterned insulation layer.

8. (Amended) [The method of claim 1], A method for forming an electronically conductive layer having patterns for semiconductor devices, comprises the steps of:

- providing a substrate;
- forming an insulation layer on the substrate, the insulation layer having predetermined functional groups;
- forming a patterned polymer layer having the patterns on the insulation layer;
- etching the insulation layer in accordance with the patterns of the patterned polymer layer to create a patterned insulation layer;
- stripping the patterned polymer layer to expose the patterned insulation layer;
- treating the patterned insulation layer with a coupling agent reacting with the predetermined functional groups;
- treating the patterned insulation layer with a catalyst-containing solution; and
- depositing electricity conductive material on the patterned insulation layer, wherein the patterned polymer layer comprises solvent soluble polyimide.

15. (Amended) A method for forming an electrically conductive layer having patterns for semiconductor devices, comprising the steps of:

- providing a substrate;
- forming a non-functional insulation layer on the substrate;
- forming [an] a functional insulation layer on the [substrate] non-functional insulation layer, the functional insulation layer having predetermined functional groups;

forming a patterned polymer layer having the patterns on the functional insulation layer,  
the patterned polymer having a coupling agent;

etching the functional insulation layer in accordance with the patterns of the patterned  
polymer layer to create a patterned insulation layer;

stripping the patterned polymer layer to expose the patterned insulation layer;

treating the patterned insulation layer with a catalyst-containing solution; and

depositing electrically conductive material on the patterned insulation layer.